INPUT®

INFORMATION SERVICES AND COMMERCIAL SYSTEMS INTEGRATION

An Opportunity Profile

Don Fostle
Vice President
INPUT

1 JJJJ DF J(s)

- Commercial Systems Integration is an Emerging Market Which Can Impact the Strategies of a Wide Range of Information Industry Firms.

- Among Those Potentially Impacted Are:
  - Software Providers
  - Professional Services Firms
  - Hardware Manufacturers
  - Telecommunications Vendors

DEFINITION OF CSI

- CSI is a Single-Source Approach to the Design Development and Implementation of Large Systems Wherein One Vendor Takes Responsibility for All (or Most) Aspects of a System Including Hardware, Software, and Communications

FURTHER REQUIREMENTS

- The System Must be Large, i.e., Over $5 Million in Development Cost
- Custom Software and Networking Must Be Present

THE GENESIS

- Although Occasionally Practiced Elsewhere, Systems Integration Has Its Contemporary Beginnings in the Federal Government Sector

- Under Policy Mandates to Use Private Sector Sources Whenever Feasible, Federal Agencies Developed the Concept of Systems Integration Under a "Life Cycle"Concept.

- In Federal, It Is Common for a Vendor (with Subcontractors) to Build and then Operate Immense "ADP" Systems

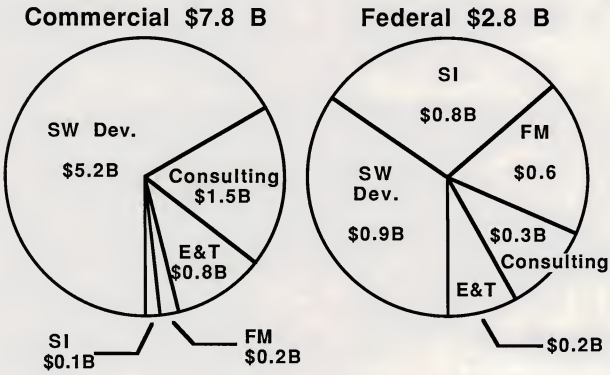
- In the Federal Sector S.I. Encompases
  - Systems Design
  - Packaged Software
  - Professional Services
  - Facilities Management
  - Maintenance

- **Current INPUT Forecasts Place the Federal Market at $800 Million in 1985 and Growing at a 16% Average Annual Growth Rate to $1.9 Billion in 1991.**

- Federal Sector Participants Include:
  - Service Firms
  - Aerospace Firms
  - Hardware Manufacturers
  - Telecommunications Vendors
  - Professional Services Firms

- Through a Combination of Forces, the Systems Integration Concept is Moving to the Commercial Sector
- INPUT tracks CSI under "Professional Services"

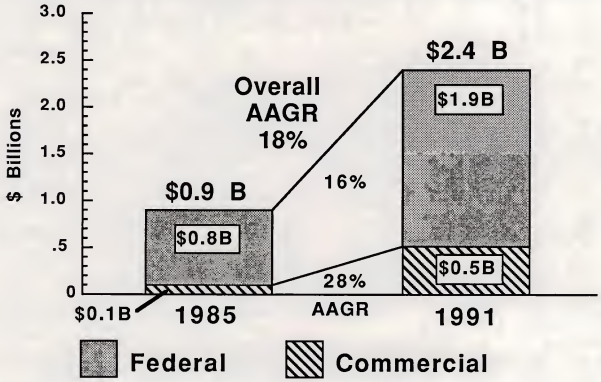
PROFESSIONAL SERVICES SEGMENTS 1985 EXPENDITURES, FEDERAL AND COMMERCIAL



JJJJ DF J(s) 11a

- Systems Integration in the Commercial Sector Is Still a Miniscule Factor (only $135 Million in 1985) but Is Expected to Grow Very Rapidly to about $630 Million by 1990.

SYSTEMS INTEGRATION
1985 EXPENDITURES AND 1991 GROWTH



JJJJ DF J(s) 11c

- This is Among the Most Rapidly Growing Areas Tracked and Events May Have Overtaken the Forecast Rendering It Conservative

CSI SUPPLY FACTORS

- On the Supply Side, a Major Factor in CSI Will Be the Interest of Federal Suppliers in "Leveraging" their Federal Skills.

CSI SUPPLY FACTORS

- Hardware Manufacturers Find the Business Attractive Because It Enhances Account Control and Provides Additional Ways to "Embed" Equipment

CSI SUPPLY FACTORS

- Telecommunications Vendors see CSI as a Way to Add Value and Guarantee Transmission Share

- **Software Suppliers See CSI as a Way To Increase Professional Services Activity, as Do P.S. Firms Themselves**

- **The Multiple Activity Nature of CSI Makes it "Franchise Expanding" for Most Potential Participants**

- **From a Defensive Perspective, CSI Implies a Much Greater Degree of Account Control and an Improved Ability to Fend Off Competitive Incursions.**

CSI DEMAND FACTORS

- Demand Factors are Complex--Among Them Are:
  - Increasing System Complexity
  - Perceived Technical Limitations
  - Need For Network Rationalization
  - Historical Problems with On-Time, On-Budget Delivery of Systems
  - Project Management Skills

CSI PSYCHOLOGY

- CSI is Fraught with Complexity from a Demand Perspective (i.e., Buyer Perspective)
- CSI "Promises" Successful Completion of Very Complex Systems

CSI PSYCHOLOGY

- CSI Shifts Control from Inside to Outside
- CSI Is a "Threat and a Promise"
- CSI Is Most Threatening and Most Applicable to the Largest, Most Critical Systems
- CSI May Be the Ultimate "Make or Buy" Dilemma

WHO WILL BUY FIRST

- Users of Very Large Network Applications
- IS Departments Which are Secure in Their Company Relationships
- The Most Competent and Aggressive Companies

- **Early Buyers Will Be "Innovators" with Difficult-to-Solve Problems**

- Since These Systems Will Be Critical to the Companies Acquiring them, they Represent Higher "Risk" to the Buyers.
- This Risk Is Compounded by the Application of a Novel Solution

- One Powerful Effect of CSI--Particularly in Oligopolic Industries--Will Be to Precipitate the Building of Similar Systems by Other Competitors

- This will Prevent Any One Integrator From Obtaining Dominance
- We Believe Chances are Slim that the Same Integrator will Develop the Same Systems for Different Competitors

- This Competitive Aspect Indicates a Higher Likelihood of Several Viable Systems Integrators
- The Key Question: Who Will They Be?

- **Each Firm Type Can Claim Certain Competencies and Each Has Certain "Liabilities"**

HARDWARE MANUFACTURERS

- In Place Excellent Relationships
- Able to Identify Opportunities Early
- Historically Weak in Software Skills
- Variable Network Skills (by Vendors)
- "Some" Industry Experience
- Perceived as Non-Objective?

P.S. FIRMS

- Good Relationships in Some Firms But Not to Hardware Depth
- Demonstrable Project Management Skills
- Industry Experience
- Questions of Project Scale and Capability
- Lesser Network Capability

FEDERAL S.I.s

- Demonstrated ("Known") Large Project Skills
- Have Performed Integration Work
- May Have Very High Software Skill
- Do Not Have Strong Commercial Relationships
- May Have Plausible Applications Skill Claims

TELECOM. COMPANIES

- Excellent Network Skills
- Relationships in Companies, but Questions of Quality and Positioning
- Some Hardware and Software Skills
- Weakest on their Own--Better in Joint Relationships?
- Other than AT&T, Participation Limited

SOFTWARE PRODUCTS COMPANIES

- Good In-Place Relationships with Moderate Coverage
- In Some, Good Software Development Skills
- Probably Weaker on Networks, Hardware

- At this Point There Is No Clear Winning Company Type that Meets All Requirements
- Joint Ventures and Subcontracting Relationships May Well Become the Norm
- Actions of Specific Firms from this Point More Important than Background
- Any Capability Can Be Built

RECOMMENDATIONS

- Consider the Impact of CSI on Your Client Base As a Competitive Alternative
- Consider the Possible Modes of Participation
  - Prime Contractor
  - Subcontractor
  - Informal Relationship
  - Co-Venture

- Because of its Wide-Ranging Nature, CSI Can Profoundly Affect the Industry
- Like any "New" Concept, It Can Alter the Competitive Picture, Creating New Opportunities for Some and Threats to the Established Order for Others
- Adaptation may be Required (at a Minimum) as the Acceptance of Commercial Systems Integration Increases

- **Systems Integration in the Commercial Sector Is Still a Miniscule Factor (only $128 Million in 1985) but Is Expected to Grow Very Rapidly to about $500 Million in 1991.**